



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,738	01/19/2006	Gau Wei Hum	1138.P040US/OCG/cc	5230
38556	7590	10/15/2008	EXAMINER	
LAWRENCE Y.D. HO & ASSOCIATES PTE LTD 30 BIDEFORD ROAD, #02-02, THONGSIA BUILDING SINGAPORE, 229922 SINGAPORE			KANAAN, SIMON P	
ART UNIT		PAPER NUMBER		
		4148		
MAIL DATE		DELIVERY MODE		
10/15/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/564,738	HUM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	SIMON KANAAN	4148	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 19 January 2006.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-14 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-14 is/are rejected.  
 7) Claim(s) 6, 9 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 19 January 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____ .

### **DETAILED ACTION**

1. The instant application having Application No. 10564738 filed on 1/19/2006 is presented for examination by the examiner.

#### **Oath/Declaration**

2. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63**.

#### **Examiner Notes**

3. Examiner cites particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner

#### **Priority**

4. As required by **M.P.E.P. 201.14(c)**, acknowledgement is made of applicant's claim for priority based on applications filed on August 23, 2004 (PCT/SG04/00255).  
Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

However, to overcome a prior art rejection, applicant(s) must submit a translation of the foreign priority papers in order to perfect the claimed foreign priority because said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

**Drawings**

5. The applicant's drawings submitted are acceptable for examination purposes.

**Claim Objections**

6. Claim 6 is objected to because it states "substantially similar" which is vague.  
7. Appropriate correction is required.

**Claim Rejections - 35 USC § 112**

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 6,8, 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. As per claim 6, the limitation "substantially similar" (line 2) renders this claim as vague and indefinite. It is not clear to the examiner what substantially similar is, it is

subject to interpretation. It appears to the examiner that applicants refers to "substantially similar" to meaning "identical" therefore, applicants might consider amending claim 6 to read – identical – in line 2.

11. As per claim 8, the limitation "prosecuting the rogue user." (line 6) renders this claim as vague and indefinite. It is not clear to the examiner what prosecuting entails and who is performing the prosecution, it is subject to interpretation. It appears to the examiner that applicants refers to "prosecuting the rogue user" to meaning "denying the rogue user access" therefore, applicants might consider amending claim 8 to read – denying rogue user access – in line 6.

12. As per claim 9, the limitations "the algorithm of the present invention" (line 7) and "without having the computer network's user having to be physically in the vicinity" (lines 8,9) render this claim as vague and indefinite. An algorithm is an abstract idea. "without having the computer network's user having to be physically in the vicinity" is vague. It appears to the examiner that the applicant refers to the algorithm of the invention as his invention and physically in the vicinity as being in the same location.

**Claim Rejections - 35 USC § 102**

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

14. Claims 9, 10, 11, 12, 13, and 14 are rejected under 35 U.S.C. 102(a) as being anticipated by Challener et al. (WO 2003/083601)

As per claims 9, Challener discloses: “A system to detect and geographically locate a rogue user wirelessly accessing a computer network,” (page 5, lines 15 through 17, *network administrator or manager can identify presence of rogue user and determine their geographical location*) “the system comprising: a computer network with at least one wireless access point,” (page 5, lines 18, *the rogue users access point is identified hence network has at least one access point*) “at least one processor,” (page 5, lines 5 and 6, *access points use low cost network processors*) “at least a network management system,” (page 5, line 12, *connected to a network management console*) “at least one storage means,” (page 9, line 25, *server system stores information hence has storage means*) and at least one implementation of the algorithm of the present invention wherein the rogue user is able to be geographically located without having the computer network’s user having to be physically in the vicinity of the rogue user.” (page 5, lines 15 through 17, *network administrator or manager can identify presence of rogue user and determine their geographical location, it is an inherent property of computer networking that as long as the systems are electronically connected they need not be in same vicinity, see also page 7, lines 19 and 20, user need not be wandering to find rogues user*).

As per claim 10, Challener discloses: “A system according to Claim 9, the computer network further comprising wireless access points which are connected to the wired computer network.” (*page 5, lines 1 through 4, devices are connected wirelessly or wired, hence the network has wireless access points connected to a wired network*)

As per claim 11, “A system further to Claim 9,” (*Challener includes all the limitations of claim 9*) “the at least one network management system further comprising at least one storage means further comprising storage of network performance parameter values, (*page 9, line 25, 16, server system stores information about signal strength, hence has storage means for a network performance parameter*), “derived network performance characteristics (*page 9, lines 11-13, signal strengths are initially checked to check calibration, this information must be measured and hence is derived network performance characteristics*) and mapped islands covered by the at least one wireless access point. (*page 9, lines 11-13, signal strengths are initially checked to check calibration, this information must be measured and hence is derived network performance characteristics, there exists at least one access point for the calibration hence there exists one island*)

As per claim 12, “A system further to Claim 9,” (*Challener includes all the limitations of claim 9*) the at least one storage means further comprising storage of network performance parameter values, derived network performance characteristics (*page 9, lines 11-13, signal strengths are initially checked to check calibration, this*

*information must be measured and hence is derived network performance characteristics which are stored and mapped islands covered by the at least one wireless access point. (page 9, lines 11-13, signal strengths are initially checked to check calibration, this information must be measured and hence is derived network performance characteristics, there exists at least one access point for the calibration hence there exists one island)*

As per claims 13, Challener discloses: “A system further to Claim 9, wherein the at least one storage means may be part of the at least one network management system.” (page 9, line 25, server system stores information hence has storage means)

As per claims 14, “A system further to Claim 9,” (Challener includes all the limitations of claim 9) the at least one implementation of the algorithm of the present invention able to geographical locate the rogue user by matching at least one network performance characteristic of the rogue user with at least one network performance characteristic of at least one pre-mapped island of the network around the at least one wireless access point. (page 9, lines 11-15, 23-27 and page 10, lines 2-5, signal strength of rogue user are compared with the signal strength of access points to determine where user is located is different functions)

**Claim Rejections - 35 USC § 103**

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claim 1, 2, 5, 6, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Challener in view of Rappaport et al. (US 2003/0023412A1).

As per claim 1, Challener discloses “A method to detect and geographical locate a rogue user wirelessly accessing a computer network, the method comprising:” (page 5, *lines 15 through 17, network administrator or manager can identify presence of rogue user and determine their geographical location*) “a. deploying at least one Network Management System program;” (page 5, *line 12, connected to a network management console*) “b. mapping a geographical area covered by the wireless computer network into at least one island;” (page 5, *lines 16 through 18, the area around an access point is an islands and helps determine the geographical locations of rogue user*) “e. identifying a potential rogue user based at least on his Media Access Control (MAC) address and Internet Protocol (IP) address;” (page 11, *lines 26 and 27, both MAC address and IP address are used*) “and i. effecting at least one network security measure against the rogue user” (page 5, *lines 18 through 20, network manager controls the activity of rogue user*) but fails to disclose expressly “c. measuring at least

one network performance parameter for each island to obtain a spatial performance model; d. deriving a performance index for each island based on the at least one performance parameter; f. measuring at least one performance parameter of the potential rogue user; g. deriving at least one performance index for the potential rogue user; h. determining location of the potential rogue user by comparing the performance index of the potential rogue user with historical, average performance indices of each island pertinent to the current time of detection;”

Rappaport discloses “c. measuring at least one network performance parameter for each island to obtain a spatial performance model;” (page 11, paragraph 98, lines 3, 20, *the signal strength is one of the parameters used to create models*) “d. deriving a performance index for each island based on the at least one performance parameter;” (page 11, paragraph 98, lines 38, *performance parameters are used as indices* ) “f. measuring at least one performance parameter of the potential rogue user” (page 11, paragraph 98, lines 38, *performance parameters are used as indices, if parameter is out of range system is triggered* ) “g. deriving at least one performance index for the potential rogue user;” (page 11, paragraph 98, lines 20, *the signal strength is one of the performance parameters*) “h. determining location of the potential rogue user by comparing the performance index of the potential rogue user with historical, average performance indices of each island pertinent to the current time of detection;” (page 11, paragraph 98, lines 38, *performance parameters are used as indices, if parameter is out of range system is triggered, page 10 paragraph 96, lines 17 through 21, average and worst-case of metrics are retrieved*)

Challener and Rappaport are analogous art because they are from the same field of endeavor of networking.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the signal strength as a performance parameter as taught by Rappaport in Challener because Challener already uses the signal strength to measure whether the user is getting closer or farther and uses other metrics to decide whether a user is authorized. It is logical to use the signal strength as another metric to determine whether the user is authorized or not. (*Challener, page 9 line 11*).

As per claim 2, “A method further to Claim 1,” (Challener in view of Rappaport include all the limitations of claim 1) “the mapping further comprises pre-identifying at least one island.” (*Challener, page 5, lines 16 through 18, the area around an access point is an island and helps determine the geographical locations of rogue user*)

As per claim 5, “A method further to Claim 1,” (*Challener in view of Rappaport include all the limitations of claim 1*) “wherein the deriving of at least one performance index further comprising dynamically re-mapping the islands previously mapped based on the current performance index of each island at time intervals. (*Rappaport, page 11, paragraph 98, line 5, data is exchanged in real time between the models and equipment*)

As per claim 6, “A method further to Claim 1” (*Challener in view of Rappaport include all the limitations of claim 1*) “wherein the deriving of the performance index of the potential rogue user is substantially similar to the deriving of the performance index for each island. (*Rappaport, page 11, paragraph 98, lines 20, the signal strength is one of the performance parameters, the signal strength whether is measured at the access point or measured from user can be measured the same way*)

As per claim 7, “A method further to Claim 1,” (*Challener in view of Rappaport include all the limitations of claim 1*) “the determining of the geographical location of the potential rogue user by comparing further comprising matching the performance indices of the at least one island with the performance index of the potential rogue user.” (*Rappaport , page 11, paragraph 98, lines 38, performance parameters are used as indices, if parameter is out of range system is triggered, is the performance index does not match the island, hence is out of range a trigger is generated*)

As per claim 8, “A method further to Claim1,” (*Challener in view of Rappaport include all the limitations of claim 1*) “the effecting at least one network security measure further comprising: logging particulars of the rogue user,” (*Challener, page 9 and 10, lines 20 through 7, the server receives information, including signal strengths to determine location of rogue user*) “displaying geographically location of the rogue user,” (*Challener, page 5, lines 17 through 18, geographic location of user is determined*) “denying access to the rogue user,” (*Challener, page 5, lines 19 through 20,*

*administrator can control activity of rogue user, which includes denying access) “and prosecuting the rogue user.“ (Challener, page 5, lines 19 through 20, administrator can control activity of rogue user, which includes denying access, rogue user is caught and denied access and hence prosecuted)*

17. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Challener in view of Rappaport and further in view of Agrawal et al. (US 2003/0045270A1).

As per claim 3 and 4, Challener and Rappaport disclose: “A method further to Claim 1, the deriving at least one network performance index for each island further comprising:” but fail to disclose expressly “a. obtaining the differences between the captured values of the performance parameter of rogue user and the performance parameter in the spatial performance model; b. determining the minimum value for each difference; c. normalizing the values for each difference to obtain rank number; and d. summing the rank numbers for each island to obtain its performance index.” And ”a. determining the minimum values of each performance parameter in the spatial performance model ; b. normalizing the values of each performance parameter in the spatial performance model and captured performance parameters of rogue user to obtain the rank numbers; c. obtaining the differences between the rank numbers of performance parameters in spatial performance model and the captured performance parameters of rogue user; and d. summing the differences for each island to obtain its performance index.”

Agrawal discloses: “a. obtaining the differences between the captured values of the performance parameter of rogue user and the performance parameter in the spatial performance model;” (*Agrawal, page 2, paragraph 17, lines 1 through 6, the parameters of the users are tracked and compared to the model, deviations are obtained by obtaining the differences*) b. determining the minimum value for each difference; (*Agrawal, page 2, paragraph 17, lines 1 through 6, the parameters of the users are tracked and compared to the model, deviations are obtained by obtaining the differences also page 1, paragraph 16, lines 12 through 15, the model is updated. Since the model given one difference is updated but in another is considered a deviation there exists a minimum difference level which is set in order differentiate from updating the model to determining there is a deviation*) c. normalizing the values for each difference to obtain rank number; and d. summing the rank numbers for each island to obtain its performance index.” (*Agrawal, page 2, paragraph 14, normalized histogram which is a probability density function of the exact location the user*) And “a. determining the minimum values of each performance parameter in the spatial performance model; (*Agrawal, page 2, paragraph 17, lines 1 through 6, the parameters of the users are tracked and compared to the model, deviations are obtained by obtaining the differences also page 1, paragraph 16, lines 12 through 15, the model is updated. Since the model given one difference is updated but in another is considered a deviation there exists a minimum difference level which is set in order differentiate from updating the model to determining there is a deviation*) b. normalizing the values of each performance parameter in the spatial performance model and captured

performance parameters of rogue user to obtain the rank numbers; (*Agrawal, page 2, paragraph 14, normalized histogram which is a probability density function of the exact location the user*) c. obtaining the differences between the rank numbers of performance parameters in spatial performance model and the captured performance parameters of rogue user; (*Agrawal, page 2, paragraph 17, lines 1 through 6, the parameters of the users are tracked and compared to the model, deviations are obtained by obtaining the differences also page 1, paragraph 16, lines 12 through 15, the model is updated. Since the model given one difference is updated but in another is considered a deviation there exists a minimum difference level which is set in order to differentiate from updating the model to determining there is a deviation*) and d. summing the differences for each island to obtain its performance index." (*Agrawal, page 2, paragraph 14, normalized histogram which is a probability density function of the exact location the user*)

Challener, Rappaport, and Agrawal are analogous art because they are from the same field of endeavor of networking.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method for determining a user is rogue by combining the method of comparing the performance parameters in Agrawal with the spatial model in Challener and Rappaport because Challener and Rappaport already use parameters to detect whether a user is authorized or not and performance parameters to locate the user. (*Challener, page 9 line 11*).

**Conclusion**

18. The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure. See **MPEP 707.05(c)**.
19. The following reference teaches execution of trial data  
US 09/628378
20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Kanaan whose telephone number is (571) 270-3906. The examiner can normally be reached on Monday to Friday 8:30 AM to 5:00 PM.
21. If attempts to reach the above noted Examiner by telephone are unsuccessful, the Examiner's supervisor, Thomas Pham, can be reached at the following telephone number: (571) 272-3689.
22. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 20, 2008

Simon Kanaan  
Examiner  
Art Unit 4148

SPK

/THOMAS K PHAM/  
Supervisory Patent Examiner, Art Unit 4148